

IN THE CLAIMS

Further amend claims 1 and 16, and please cancel claim 21 as shown in the listing of claims below.

1. (CURRENTLY AMENDED) A semiconductor device comprising:
a semiconductor substrate;
a gate insulator formed on the substrate; and
a gate electrode having a metallic compound film, the gate electrode being formed on the insulator, wherein;

the metallic compound film in the gate electrode is formed by CVD using a material containing a metal carbonyl, a C-containing material, and at least one of a Si-containing material and a N-containing material;

the metallic compound film contains the [[a]] metal in the metal carbonyl, the C, and at least one of the Si and the N; and

~~the content of at least one of Si and N in the metallic compound film is such that the work function of the metallic compound film is in the mid-gap of Si~~

the work function of the metallic compound film can be controlled by changing the content of at least one of the Si and the N in the metallic compound film.

2. (PREVIOUSLY PRESENTED) The semiconductor device according to claim 1, wherein the metal is selected from the group consisting of W, Ni, Co, Ru, Mo, Re, Ta, and Ti.

3-6. (CANCELED)

7. (ORIGINAL) The semiconductor device according to claim 1, wherein the metallic compound film is doped with an *n*-type impurity or a *p*-type impurity.

8. (ORIGINAL) The semiconductor device according to claim 1, wherein the gate electrode further comprises a silicon film formed on the metallic compound film.

9-14. (CANCELED)

15. (PREVIOUSLY PRESENTED) The semiconductor device according to claim 1, wherein the metallic compound film is used for a gate electrode of *p*MOS or *n*MOS of a MOS device.

16. (CURRENTLY AMENDED) A method for manufacturing a semiconductor device including a gate electrode having a metallic compound film, the method comprising:

preparing a material containing a metal carbonyl, a C-containing material and at least one of a Si-containing material and a N-containing material; and

forming, by CVD using the prepared materials, the metallic compound film ~~containing a~~ so that the film contains the metal in the metal carbonyl, the C, and at least one of the Si and the N;

wherein, by controlling film deposition conditions, the content of the at least one of the Si and the N in the metallic compound film is adjusted such that the work function of the metallic compound film is in the mid-gap of Si.

17. (PREVIOUSLY PRESENTED) The method according to claim 16, wherein the metal constituting the metal carbonyl is selected from the group consisting of W, Ni, Co, Ru, Mo, Re, Ta, and Ti.

18. (PREVIOUSLY PRESENTED) The method according to claim 16, wherein the metal carbonyl is $W(CO)_6$.

19. (PREVIOUSLY PRESENTED) The method according to claim 16, wherein the Si-containing material is selected from the group consisting of silane, disilane, and dichlorosilane.

20. (PREVIOUSLY PRESENTED) The method according to claim 16, wherein the N-containing material is selected from the group consisting of ammonia and monomethyl hydrazine.

21. (CANCELED)

22. (PREVIOUSLY PRESENTED) The method according to claim 16, wherein the metallic compound film is doped with an *n*-type impurity or a *p*-type impurity.

23. (PREVIOUSLY PRESENTED) The method according to claim 16, further comprising forming a silicon film on the metallic compound film.

24. (PREVIOUSLY PRESENTED) The method according to claim 21, wherein the C-containing material is selected from the group consisting of ethylene, allyl alcohol, formic acid, and tetrahydrofuran.

25. (PREVIOUSLY PRESENTED) The method according to claim 16, wherein the metallic compound film is used for a gate electrode of *p*MOS or *n*MOS of a MOS device.